

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Shingo Eguchi et al.                      Art Unit : Unknown  
Serial No. : Unassigned                                  Examiner : Unknown  
Filed : August 10, 2001  
Title : SEMICONDUCTOR DEVICE

Commissioner for Patents  
Washington, D.C. 20231

**PRELIMINARY AMENDMENT**

Prior to examination, please amend the application as follows:

In the claims:

**Amend claims 2-4, 6-8, 10-12 and 14-27 as follows:**

2. A semiconductor device according to claim 1, wherein a pixel electrode is formed on said insulating film and said second electrode is in contact with said pixel electrode.

3. A semiconductor device according to claim 1, wherein said second electrode is a pixel electrode.

4. A semiconductor device according to claim 1, wherein said semiconductor device is incorporated into electronic equipment selected from the group consisting of a personal computer, a video camera, a mobile computer, a goggle type display, a player, a digital camera, a front-type projector, a rear-type projector, a portable telephone, a portable book, and a display.

6. A semiconductor device according to claim 5, wherein a pixel electrode is formed on said insulating film and said second electrode is in contact with said pixel electrode.

7. A semiconductor device according to claim 5, wherein said second electrode is a pixel electrode.

8. A semiconductor device according to claim 5, wherein said semiconductor device is incorporated into electronic equipment selected from the group consisting of a personal

computer, a video camera, a mobile computer, a goggle type display, a player, a digital camera, a front-type projector, a rear-type projector, a portable telephone, a portable book, and a display.

10. A semiconductor device according to claim 9, wherein a pixel electrode is formed on said insulating film and said second electrode is in contact with said pixel electrode.

11. A semiconductor device according to claim 9, wherein said second electrode is a pixel electrode.

12. A semiconductor device according to claim 9, wherein said semiconductor device is incorporated into electronic equipment selected from the group consisting of a personal computer, a video camera, a mobile computer, a goggle type display, a player, a digital camera, a front-type projector, a rear-type projector, a portable telephone, a portable book, and a display.

14. A semiconductor device according to claim 13, further comprising a liquid crystal layer provided over said second electrode.

15. A semiconductor device according to claim 13, wherein a pixel electrode is formed on said insulating film and said second electrode is in contact with said pixel electrode.

16. A semiconductor device according to claim 13, wherein said second electrode is a pixel electrode.

17. A semiconductor device according to claim 13, wherein said semiconductor device is incorporated into electronic equipment selected from the group consisting of a personal computer, a video camera, a mobile computer, a goggle type display, a player, a digital camera, a front-type projector, a rear-type projector, a portable telephone, a portable book, and a display.

18. A semiconductor device comprising:  
a semiconductor film;

a gate insulating film provided on said semiconductor film;  
a first electrode which is provided on said gate insulating film and overlaps said semiconductor film;  
an insulating film formed on said first electrode;  
a contact hole which is provided in said insulating film and has a depth so as to reach said first electrode;  
a gate wiring which is formed on said insulating film and connected with said first electrode through said contact hole; and  
a second electrode provided on said insulating film,  
wherein a storage capacitor is constructed by said first electrode, said gate insulating film, and said semiconductor film and overlapped at 90% or more of an area thereof with said second electrode.

19. A semiconductor device according to claim 18, further comprising a liquid crystal layer provided over said second electrode.

20. A semiconductor device according to claim 18, wherein a pixel electrode is formed on said insulating film and said second electrode is in contact with said pixel electrode.

21. A semiconductor device according to claim 18, wherein said second electrode is a pixel electrode.

22. A semiconductor device according to claim 18, wherein said semiconductor device is incorporated into electronic equipment selected from the group consisting of a personal computer, a video camera, a mobile computer, a goggle type display, a player, a digital camera, a front-type projector, a rear-type projector, a portable telephone, a portable book, and a display.

23. A semiconductor device comprising:  
a first semiconductor film;  
a second semiconductor film;

a gate insulating film provided on said first semiconductor film and said second semiconductor film;

a first electrode which is provided on said gate insulating film, intersects said first semiconductor film, and overlaps said second semiconductor film;

an insulating film formed on said first electrode;

a contact hole which is provided in said insulating film and has a depth so as to reach said first electrode;

a gate wiring which is formed on said insulating film and connected with said first electrode through said contact hole; and

a second electrode provided on said insulating film,

wherein a storage capacitor is constructed by said first electrode, said gate insulating film, and said second semiconductor film and overlapped at 90% or more of an area thereof with said second electrode.

24. A semiconductor device according to claim 23, further comprising a liquid crystal layer provided over said second electrode.

25. A semiconductor device according to claim 23, wherein a pixel electrode is formed on said insulating film and said second electrode is in contact with said pixel electrode.

26. A semiconductor device according to claim 23, wherein said second electrode is a pixel electrode.

27. A semiconductor device according to claim 23, wherein said semiconductor device is incorporated into electronic equipment selected from the group consisting of a personal computer, a video camera, a mobile computer, a goggle type display, a player, a digital camera, a front-type projector, a rear-type projector, a portable telephone, a portable book, and a display.

REMARKS

The amendments to the claims made herein are to correct minor grammatical errors and to place the application in better form for examination. No new matter is added.

Attached is a marked-up version of the changes being made by the current amendment.

Applicants ask that all claims be examined. Please apply any charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Date: August 10, 2001

  
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**Version with markings to show changes made**

In the claims:

**Claims 2-4, 6-8, 10-12 and 14-27 have been amended as follows:**

2. (Amended) A semiconductor device according to **[any one of claims]** claim 1, wherein a pixel electrode is formed on said insulating film and said second electrode is in contact with said pixel electrode.

3. (Amended) A semiconductor device according to **[any one of claims]** claim 1, wherein said second electrode is a pixel electrode.

4. (Amended) A semiconductor device according to claim 1, wherein said semiconductor device is incorporated into **[an]** electronic equipment selected from the group consisting of a personal computer, a video camera, a mobile computer, a goggle type display, a player, a digital camera, a front-type projector, a rear-type projector, a portable telephone, a portable book, and a display.

6. (Amended) A semiconductor device according to **[any one of claims]** claim 5, wherein a pixel electrode is formed on said insulating film and said second electrode is in contact with said pixel electrode.

7. (Amended) A semiconductor device according to **[any one of claims]** claim 5, wherein said second electrode is a pixel electrode.

8. (Amended) A semiconductor device according to claim 5, wherein said semiconductor device is incorporated into **[an]** electronic equipment selected from the group consisting of a personal computer, a video camera, a mobile computer, a goggle type display, a player, a digital camera, a front-type projector, a rear-type projector, a portable telephone, a portable book, and a display.

10. (Amended) A semiconductor device according to **[any one of claims]** claim 9, wherein a pixel electrode is formed on said insulating film and said second electrode is in contact with said pixel electrode.

11. (Amended) A semiconductor device according to **[any one of claims]** claim 9, wherein said second electrode is a pixel electrode.

12. (Amended) A semiconductor device according to claim 9, wherein said semiconductor device is incorporated into **[an]** electronic equipment selected from the group consisting of a personal computer, a video camera, a mobile computer, a goggle type display, a player, a digital camera, a front-type projector, a rear-type projector, a portable telephone, a portable book, and a display.

14. (Amended) A semiconductor device according to **[any one of claims]** claim 13, further comprising a liquid crystal layer provided over said second electrode.

15. (Amended) A semiconductor device according to **[any one of claims]** claim 13, wherein a pixel electrode is formed on said insulating film and said second electrode is in contact with said pixel electrode.

16. (Amended) A semiconductor device according to **[any one of claims]** claim 13, wherein said second electrode is a pixel electrode.

17. (Amended) A semiconductor device according to claim 13, wherein said semiconductor device is incorporated into **[an]** electronic equipment selected from the group consisting of a personal computer, a video camera, a mobile computer, a goggle type display, a player, a digital camera, a front-type projector, a rear-type projector, a portable telephone, a portable book, and a display.

18. (Amended) A semiconductor device comprising:  
a semiconductor film;  
a gate insulating film provided on said semiconductor film;  
a first electrode which is provided on said gate insulating film and overlaps said semiconductor film;  
an insulating film formed on said first electrode;  
a contact hole which is provided in said insulating film and has a depth so as to reach said first electrode;  
a gate wiring which is formed on said insulating film and connected with said first electrode through said contact hole; and  
a second electrode provided on said insulating film,  
wherein a storage capacitor is constructed by said first electrode, said gate insulating film, and said semiconductor film and overlapped at 90% or more of an area thereof with said second electrode.

19. (Amended) A semiconductor device according to **[any one of claims]** claim 18, further comprising a liquid crystal layer provided over said second electrode.

20. (Amended) A semiconductor device according to **[any one of claims]** claim 18, wherein a pixel electrode is formed on said insulating film and said second electrode is in contact with said pixel electrode.

21. (Amended) A semiconductor device according to **[any one of claims]** claim 18, wherein said second electrode is a pixel electrode.

22. (Amended) A semiconductor device according to claim 18, wherein said semiconductor device is incorporated into **[an]** electronic equipment selected from the group consisting of a personal computer, a video camera, a mobile computer, a goggle type display, a player, a digital camera, a front-type projector, a rear-type projector, a portable telephone, a portable book, and a display.



23. (Amended) A semiconductor device comprising:

- a first semiconductor film;
- a second semiconductor film;
- a gate insulating film provided on said first semiconductor film and said second semiconductor film;
- a first electrode which is provided on said gate insulating film, intersects said first semiconductor film, and overlaps said second semiconductor film;
- an insulating film formed on said first electrode;
- a contact hole which is provided in said insulating film and has a depth so as to reach said first electrode;
- a gate wiring which is formed on said insulating film and connected with said first electrode through said contact hole; and
- a second electrode provided on said insulating film,

wherein a storage capacitor is constructed by said first electrode, said gate insulating film, and said second semiconductor film and overlapped at 90% or more of an area thereof with said second electrode.

24. (Amended) A semiconductor device according to **[any one of claims]** claim 23, further comprising a liquid crystal layer provided over said second electrode.

25. (Amended) A semiconductor device according to **[any one of claims]** claim 23, wherein a pixel electrode is formed on said insulating film and said second electrode is in contact with said pixel electrode.

26. (Amended) A semiconductor device according to **[any one of claims]** claim 23, wherein said second electrode is a pixel electrode.

27. (Amended) A semiconductor device according to claim 23, wherein said semiconductor device is incorporated into **[an]** electronic equipment selected from the group

consisting of a personal computer, a video camera, a mobile computer, a goggle type display, a player, a digital camera, a front-type projector, a rear-type projector, a portable telephone, a portable book, and a display.